

REMARKS

Claims 1-9 are pending in this application. Claim 1 is the only independent claim.

Reconsideration in view of the following remarks is respectfully solicited.

Personal Interview

Applicant wishes to thank Examiner Tuan A. Tran for the courtesies extended to Applicant's representative, Carolyn Baumgardner, during the February 16, 2006 personal interview. During the interview, the differences between the claimed invention and the cited reference, Futamura, were discussed. The substance of the personal interview is summarized in the following remarks.

The Claims Define Patentable Subject Matter

The final Office Action rejects:

(1) claims 1 and 2 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,535,499 to Futamura et al. (hereafter Futamura) in view of U.S. Patent Number 6,633,550 to Gärdenfors et al. (hereafter Gardenfors); and

(2) claims 3-9 under 35 U.S.C. §103(a) as being unpatentable over Futamura in view of Gardenfors and further in view of U.S. Patent Number 6,490,441 to Saito (hereafter Saito) and U.S. Patent Number 6,466,270 to Ichihara (hereafter Ichihara).

These rejections are respectfully traversed.

Applicant respectfully submits that the claimed invention, as set forth in independent claim 1, is distinguishable from the combination of Futamura and Gardenfors for at least the following reasons:

The Examiner concedes that Futamura fails to disclose that its middle frequency amplifier 79 is a variable low pass filter, as claimed. In an attempt to show this low pass filter feature, the Examiner imports Gardenfors.

However in response to our previous arguments the Examiner appears to be ignoring our arguments pertaining to Gardenfors' failure to disclose an adjustable/variable low pass filter.

For example, applicant previous argued that that Gardenfors fails to disclose an adjustable/variable low pass filter. Instead, Gardenfors merely discloses a fixed Gaussian shaping filter (124) used to suppress the out-of-band signal power. (see Gardenfors, col. 6, lines 26-47).

In fact, Gardenfors fails to categorize its low pass shaping filter 124 as having a variable characteristic. Instead, Gardenfors is completely silent about its Gaussian shaping filter 124 having any type of variable abilities.

Applicant respectfully submits that one skilled in the art would recognize that a filter would have a fixed characteristic unless specifically noted otherwise. As such, applicant submits that Gardenfors' fixed Gaussian shaping filter is merely a filter having a band pass characteristic of a Gaussian curve.

Furthermore, both Gardenfors and Futamura fail to teach or suggest a second adjustment means, provided in the low pass

filter, for adjusting a cut-off frequency of the low pass filter. For example, Gardenfors is completely silent about its low pass shaping filter 124 having a second adjustment means for adjusting a cut-off frequency of the low pass filter, as set forth in the present invention. Gardenfors merely classifies this filter 124 as a Gaussian shaping filter and Gardenfors fails to describe any internal means therein relating to adjustment of cut-off frequency.

In the present invention, Figs. 2-5 illustrate exemplary embodiments of a low pass filter and adjustment means capable of being incorporated therein. Both Gardenfors and Futamura fail to teach or suggest such adjustment means being responsive to a frequency adjustment signal.

Instead, at most, Futamura merely discloses a processor 83 that outputs control signals to the middle-frequency amplifiers 75 and 79. However, these control outputs coming from Futamura's processor 83 fail to be associated with first and second adjustment means found in the band pass filter and the low pass filter, respectively, as set forth in the claimed invention.

In the present invention, the band pass filter has a first adjustment means for adjusting the band pass characteristic in response to the frequency adjustment signal, and the low pass filter has a second adjustment means for adjusting a cut-off frequency of the low pass filter in response to the same frequency adjustment signal. As such, although the same frequency adjustment signal is being shared by the band pass filter and the low pass filter, each of the band pass filter and the low pass filter has its own adjustment means provided therein.

that is responsive to the shared frequency adjustment signal. (see present specification, at least pages 16-17; and Figs. 2-5).

Both Futamura and Gardenfors fail to teach or suggest the first and second adjustment means, being provided in the band pass filter and low pass filter, respectively. Instead, Futamura merely discloses the processor 83 sending out control inputs (which arguably merely corresponds to the claimed frequency adjustment signal) going to the middle-frequency amplifiers 75 and 79.

As such, applicant respectfully submits that the combination of Futamura and Gardenfors fails to teach or suggest each and every feature as set forth in the present invention.

Applicant respectfully submits that neither Futamaru nor Gardenfors, taken singularly or in combination, (assuming these teachings may be combined, which applicant do not admit) teach or suggest a low pass filter as claimed.

To establish a *prima facie* case of Obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable

expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP 706.02(j).

Applicant respectfully submits that the combination of cited references fail to teach or suggest each and every feature as set forth in the claimed invention. Furthermore, applicant respectfully submits that Saito and Ichihara fail to make up for the deficiencies found in the combination of Futamura and Gardenfors, noted above.

Applicant respectfully submits that independent claim 1 is allowable over the cited art for at least the reasons noted above.

As for each of the dependent claims not particularly discussed above, these claims are also allowable for at least the reasons set forth above regarding their corresponding independent claims, and/or for the further features claimed therein.

Accordingly, withdrawal of the rejection of claims 1-9 under 35 U.S.C. §103(a) is respectfully requested.

Conclusion

In view of the foregoing, Applicant respectfully submits that the application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact Carolyn T.

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Baumgardner (Reg. No. 41,345) at (703) 205-8000 to schedule a Personal Interview.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment from or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17; particularly, the extension of time fees.

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Respectfully submitted,

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